

Work Order ID 145159

Tuesday, May 03, 2016 2:02:45 PM

145159

Page 1

Item ID: D5321-5

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Ring

Stop ***NS2***

Start Date: 5/6/2016 Start Qty: 32.00

Required Date: 5/18/2016 Req'd Qty: 32.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: MLJ Date: MAY 03 2016 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D5321	B

100 0.00

100

Purchasing

Purchasing

Memo

Issue P/O: 32250
Possible supplier: McMaster Carr
Supplier P/N: 9372T21

C of C is required.

0.00

40 MAY 03 2016 DAS 13 9:00

110

Receive & Inspect for Damage & Mat'l Certs

0.00

110

Packaging

Packaging

Memo

0.00

40x SP116-05-9

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 145159

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Item ID: D5321-5 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Ring
Start Date: 5/6/2016 Start Qty: 32.00 ***32*** Cust Item ID:
Required Date: 5/18/2016 Req'd Qty: 32.00 ***32*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC6- Inspect dimensions to drawing	0.00							
120									
QC	Memo	0.00							
Quality Control									
									DAS 38 9-30 MAY 09 2016
130	Identify as per dwg & Stock Location: <u>St/62</u>	0.00							
130									
Packaging	Memo	0.00							
Packaging									
									40 MAY 09 2016 DAS 6 9-30
140	QC21- Final Inspection - Work Order Release	0.00							
140									
QC	Memo	0.00							
Quality Control									
									MCS MAY 10 2016 MCS MAY 10 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

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145159

D5321-5

Required Date: 5/18/2016

Required Qty: 32.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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0.0000

9372T21

Ring

**

³²Yor sp 16-059

DQA: _____ Date: _____



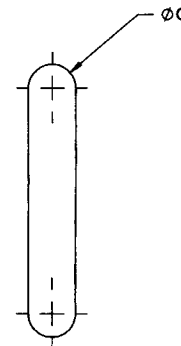
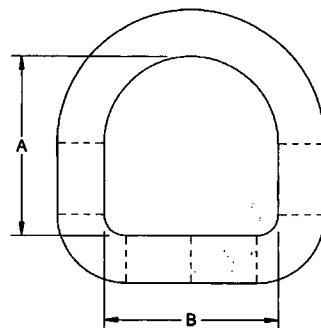
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval 		
Description Work Order Deviation				Disposition					
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐
Past Expiry Date ☐	☐	Manufacturing Process	☐	OTHER :			
Misidentified ☐	☐	Past Due	☐				



145-159.MLS
1605-05

PART NUMBER	VENDOR	VENDOR P/N	BREAK STRENGTH	WORKING LOAD LIMIT	WEIGHT	DIM 'A'	DIM 'B'	DIM 'C'	MATERIAL
D5321-1	U.S.C.C.	MR15	6,000 lbs	2,000 lbs	0.22 lbs	1.50	1.45	0.39	ZINC PLATED STEEL
D5321-3	ANCRA	48557-11	5,000 lbs	1,666 lbs	0.09 lbs	1.50	1.50	0.25	CAD PLATED STEEL
D5321-5	MCMaster-CARR	9372T21	600 lbs	200 lbs	0.05 lbs	0.81	1.06	0.22	NICKEL PLATED STEEL

- 1) MATERIAL: SEE TABLE
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY PER QSI 044 6.7
- 7) WEIGHT: SEE TABLE

B	ADD D5321-5	DB	16.02.08
A	NEW RELEASE	DB	15.09.30
REV.	DESCRIPTION		BY DATE
DESIGN	DB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D5321 REV. B SHEET 1 OF 1 TITLE RING SCALE NTS	
DRAWN	AK		
CHECKED	ML		
MFG. APPR.	DD		
APPROVED	WM		
DE APPR.	DS		
DATE	16.02.08		

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RELEASE
2016-03-23
FEN 16-548

APPROVED

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Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO32250

Purchase Order Date 5/4/2016

PO Print Date 5/4/2016

Page Number 3 of 4

Order From :
MCMASTER-CARR SUPPLY CO,
P.O. BOX 7690
CHICAGO, IL 60680-7690
US

VU-MCM001

Ship To : DART AEROSPACE LTD
1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Contact Name
Vendor Phone 330 995 5500

Ship To Contact
Ship To Phone
Ship Via: Purolator ground ppd
Ship Acct:

Buyer
Customer POID
Customer Tax # 10127-2607
Terms Net 10
Currency USD
FOB FCA - (Free Carrier)

Line Total: \$25.20

7 3132T2 Suspension Rope

5/6/2016 FN
Yes
5/6/2016

25.00
Each

\$0.87

\$21.75

AS PER DWG D5408 REV. A
B145162

Line Total: \$21.75

8 9372T21

Ring

5/6/2016 FN
Yes
5/6/2016

32.00
Each

\$0.87

\$21.34

AS PER DWG D5321 REV. B
B145159

Line Total: \$21.34

9 72000-45

5848K13 MAGNET

5/6/2016
Yes
5/6/2016

6.00
Each

\$2.88

\$17.28

Note:

5/4/2016



200 Aurora Industrial Pkwy
Aurora OH 44202-8087
330-995-5500
cle.sales@mcmaster.com

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury ON K6A 1K7
Canada
Attention: Chantal

Purchase Order
PO32250

Order Placed By
Chantal Lavoie

McMaster-Carr Number
2865525-01

Page 1 of 1

05/04/2016

Line	Product	Ordered	Shipped
1	26955A71 ✓ General Purpose Tap, for Closed-End Hole Threading, LG-Life, 4-40 Thread Size	6 Each	6 ✓
4	54845T85 ✓ 6" X 3/4" Tongue Depressors, Packs of 500	4 Packs	4 ✓
5	9381T24 ✓ Open-End S-Hook-Not for Lifting, Zinc-Plated Steel, 20 lbs. Cap., Packs of 25	20 Packs	20 ✓
6	3076T13 ✓ Tie-Down Ring, Zinc-Plated Steel Ring & Clamp, 500# Work Load Limit, 2" ID	24 Each	24 ✓
7	3132T2 ✓ Rope with Hook - Not for Lifting, Polyester Cover, 5/32" Diameter	25 Feet	25 ✓
8	9372T21 ✓ Welded Nickel-Plated Steel D-Ring, for 1" Webbing Width, Packs of 10, Shipping 4 Packs To Meet Your Needs of 32 Each	4 Packs	4 ✓
9	5848K13 ✓ Neodymium Magnet, 3/8" Long, 3/8" Wide, 0.1" Thick, 3 lbs Max Pull	6 Each	6 ✓

8016-05-09

Expected to ship

2	94675A999 Air Power-Driven Rivet Nut Installation Tool, Rotor Blade Kit, Includes 5 Vanes, P/N Ssg-802-9	2 Kits	2 to ship by 05/18
3	8077K235 Compact Brass Solenoid Valve, 1/4 NPT with DIN Connector, 110 PSI, 120V AC	1 Each	1 to ship by 05/18

Notes about your shipment

The U.S. Department of Transportation regulates the shipping of line 9. By purchasing from McMaster-Carr Supply Company, you agree not to transport or permit others to transport purchased items except in accordance with U.S. law and any other applicable laws.